

## CLAIMS:

1. A photosensitive chip for use in an imaging apparatus, comprising:  
a main surface, having at least one photosite thereon, the main surface  
5 defining an edge;  
a groove portion defined at the edge;  
a light-transmissive planar layer disposed over the main surface, the planar  
layer forming a planar surface substantially parallel with the main surface, the planar  
layer extending over the groove portion; and  
10 a light-transmissive filtering layer disposed over the planar layer.

2. The chip of **claim 1**, the planar layer comprising acrylic.

3. The chip of **claim 1**, the filtering layer comprising acrylic.

4. The chip of **claim 1**, the planar layer being light transmissive.

5. The chip of **claim 1**, the filtering layer being light transmissive.

6. The chip of **claim 1**, the planar layer being substantially transmissive of  
visible light, and the filtering layer being transmissive of a predetermined range of  
wavelengths of light.

7. The chip of **claim 1**, the filtering layer comprising a first portion transmissive of a first predetermined range of wavelengths of light and a second portion transmissive of a second predetermined range of wavelengths of light.

5

8. The chip of **claim 7**, the first portion being disposed over a first photosite and the second portion being disposed over a second photosite.

9. The chip of **claim 7**, the first portion being disposed over a first set of photosites and the second portion being disposed over a second set of photosites.

10

10. The chip of **claim 1**, further comprising a ridge defined on the main surface between the photosite and the groove portion.

11. An imaging apparatus having a first photosensitive chip, the chip comprising:

15

a main surface, having at least one photosite thereon, the main surface defining an edge;

a groove portion defined at the edge;

a light-transmissive planar layer disposed over the main surface, the planar layer forming a planar surface substantially parallel with the main surface, the planar layer extending over the groove portion; and

20

a light-transmissive filtering layer disposed over the planar layer.

25

12. The apparatus of **claim 11**, the planar layer comprising acrylic.

13. The apparatus of **claim 11**, the filtering layer comprising acrylic.

14. The apparatus of **claim 11**, the planar layer being substantially transmissive of visible light, and the filtering layer being transmissive of a predetermined range of wavelengths of light.

5 15. The apparatus of **claim 11**, the filtering layer comprising a first portion transmissive of a first predetermined range of wavelengths of light and a second portion transmissive of a second predetermined range of wavelengths of light.

10 16. The apparatus of **claim 15**, the chip including a plurality of photosites on the main surface thereof, the first portion being disposed over a first set of photosites on the first chip and the second portion being disposed over a second set of photosites on the first chip.

15 17. The apparatus of **claim 11**, further comprising a second photosensitive chip, the second chip having a planar layer and a filtering layer arranged substantially similarly to the first chip.

20 18. The apparatus of **claim 11**, further comprising a second photosensitive chip, the second chip having a plurality of photosites thereon, the first chip and the second chip being arranged to yield a single functional array of photosites.

19. The apparatus of **claim 18**, the second chip having a planar layer and a filtering layer arranged substantially similarly to the first chip.

---

25 20. An integrated circuit wafer, comprising:  
a first chip area defined in a main surface of the wafer, the first chip area including structure related to a first photosite;  
a groove defined in the wafer, the groove defining at least one edge of the first chip area; and

Sub  
B3

Sub  
B3  
enc

a light-transmissive planar layer disposed over the main surface, the planar layer forming a planar surface substantially parallel with the main surface, the planar layer extending over the groove.

---

21. The wafer of **claim 20**, the planar layer comprising acrylic.

5

22. The wafer of **claim 20**, the planar layer further disposed over the first photosite.

10 23. The wafer of **claim 20**, further comprising a filtering layer disposed over the planar layer.

24. The wafer of **claim 23**, the filtering layer extending over the first photosite and over the groove.

15 25. The wafer of **claim 23**, the filtering layer comprising acrylic.

26. The wafer of **claim 20**, further comprising a second chip area defining a second photosite, the filtering layer further extending over the second photosite.

20 27. The wafer of **claim 20**, the filtering layer comprising a first portion transmissive of a first predetermined range of wavelengths of light and a second portion transmissive of a second predetermined range of wavelengths of light.

25 28. The wafer of **claim 20**, the first chip area including a first plurality of photosites, the first portion of the filtering layer being disposed over a first set of photosites on the first chip area and the second portion of the filtering layer being disposed over a second set of photosites in the first chip area.

29. The wafer of **claim 28**, further comprising a second chip area defining a second plurality of photosites, the second chip area including a second plurality of photosites, the first portion of the filtering layer being disposed over a first set of photosites on the second chip area and the second portion of the filtering layer being disposed over a second set of photosites in the second chip area.

30. The wafer of **claim 20**, the first chip area further comprising a ridge defined on the main surface between the photosite and the groove portion.

10  
31. A method of making photosensitive chips for use in an imaging apparatus, comprising the steps of:

Sub  
B  
a  
15  
providing an integrated circuit wafer, the wafer comprising a first chip area defined in a main surface of the wafer, the first chip area including structure related to a first photosite, and a groove defined in the wafer, the groove defining at least one edge of the first chip area; and

providing a light-transmissive planar layer over the main surface, the planar layer forming a planar surface substantially parallel with the main surface, the planar layer extending over the groove.

20  
32. The method of **claim 31**, the planar layer comprising acrylic.

33. The method of **claim 31**, further comprising the step of dicing the wafer along the groove.

25  
34. The method of **claim 31**, further comprising the step of providing a filtering layer disposed over the planar layer.

30  
35. The method of **claim 34**, the filtering layer extending over the first photosite and over the groove.

36. The method of **claim 34**, the filtering layer comprising acrylic.

37. The method of **claim ~~30~~<sup>31</sup>**, further comprising the step of providing in the  
5 chip area a ridge defined on the main surface between the photosite and the groove.

57a